

# S&MA Mission Services Task Directive

<b>Control No.</b> 0088	<b>ORG No.:</b> QS10	<b>PROJECT SYMBOL:</b> X-37	<b>Contract No.</b> NAS8-00179
<b>Originator's Signature:</b> Van Strickland <i>Van L Strickland</i>		<b>Date:</b> 7/1/02	<b>Originator's Priority:</b> High
<b>Office Manager's Signature:</b> Tom Hartline <i>T Hartline</i>		<b>Date:</b> 7/3/02	
<b>COTR's Approval:</b> <i>Terry J. Ha</i>		<b>Date:</b> 7-16-02	
<b>Subject:</b> Safety & Mission Assurance support for the X-37 Project			

## Task Description:

### Safety (PWS Section 3.0)

- 1) Support Product Development Team to assure safety requirements understood and incorporated in design
- 2) Support development of S&MA Plan + SIP (220)
- 3) Support Milestone Reviews (SRR, PDR, CDR, SRP, etc)
- 4) Review Safety Data Package/Hazard Analysis
- 5) Support Safety Review Panels MSFC, JSC, KSC or Range as applicable
- 6) Support Software Safety for project (Space Station elements only)
- 7) Evaluate project design changes for safety impacts
- 8) Review Verification Plans/procedure/closures

### R&M (PWS Section 5.0)

- 1) Support development of S&MA Plan
- 2) Support Product Development Team to assure reliability requirements are included in design
- 3) Support Milestone Reviews, (SRR, PDR, CDR, etc)
- 4) Develop FMEA/CIL/Reliability Assessment for in-house hardware (review FMEA/CIL if not in-house hardware)
- 5) Support Reliability Review Board for ISS Flight Element Hardware

### Quality (PWS Section 6.0)

- 1) Support Product Development Team
- 2) Support development of S&MA Plan and Prepare or Evaluate the Project Quality Plan
- 3) Participate in Milestone Reviews (SRR, PDR, CDR, DCR, AR, FRR, etc.)
- 4) Evaluate inspection criteria
- 5) Participate in Project Team Meetings and TIMs
- 6) Support failure and problem analyses, MRB, and the non-conforming materials process for hardware
- 7) Support internal and external audits
- 8) Evaluate engineering changes, waivers and deviations
- 9) Evaluate test plans and procedures and witness testing of hardware and software
- 10) Evaluate project and project related plans and procedures
- 11) Evaluate verification data and documentation
- 12) Develop PQA requirements for project procurements

### Project Assurance (PWS Section 8.0)

- 1) Participate in the milestone reviews, data reviews, safety reviews and flight readiness or operations
- 2) Support development of S&MA inputs for flight readiness of Payload hardware
- 3) Coordinate the HEI S&MA activities with the S&MA project lead to include resource status
- 4) Coordinate the development of Fault Tree Analysis (FTA) performed by discipline - (if deemed necessary; if not in-house then contractor may perform)
- 5) Develop S&MA Plan if deemed necessary

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## Deliverables:

### Safety

- 1) Safety inputs to the S&MA Plan, engineering changes, Verifications, etc.
- 2) Safety support to Milestone Reviews (generate Review Item Discrepancies (RIDs))
- 3) Comments to Safety Data Package

### R&M

- 1) Reliability inputs to S&MA Plan, engineering changes, etc.
- 2) Reliability review comments to Milestone Review documentation
- 3) FMEA/CIL or Reliability Assessments as appropriate for various project milestones (if in-house project)

### Quality

- 1) Quality input to S&MA Plan, Quality Plan, engineering changes, problem analyses, etc.
- 2) Review comments for Milestone Review documentation, project plans, procedures, drawings, process plans, etc.
- 3) Input to procurements
- 4) Presentation material for reviews
- 5) Meeting and trip reports

### Project Assurance

- 1) Provide periodic status of functional discipline support to project in form of matrix
- 2) S&MA Plans in conjunction with assigned disciplines (if applicable)
- 3) Flight Readiness/PAR data as applicable
- 4) FTAs as applicable

## Schedules/Duration:

- 1) Support schedules as defined by the Project
- 2) *Define the anticipated life of project requiring support*

## Resource Estimate:

Report Progress To: *S&MA Project Lead*

Frequency of Report:

Weekly